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STUDIES OF THE ACUTE DIARRHEAL DISEASES

XIII. CULTURAL SURVEYS OF NORMAL POPULATION GROUPS [1]

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In connection with the study of the diarrheal diseases, samples of the general population were surveyed to discover, by cultural examinations, the incidence of subclinical cases.

METHODS

Three methods were employed in obtaining study groups. (1) Communities were selected in which all, or a high proportion, of the individuals could be examined, including small villages, delimited rural or suburban areas, and, in New York City, hospital populations. The chief considerations which determined selection of a representative area were accessibility, size, and anticipated cooperativeness. (2) The second type of study group was composed of families scattered in the urban population. In Albuquerque, N. Mex., names were secured from certificates of birth recorded for the 6 months prior to the survey. The recognized seriousness of the diarrheal diseases in infants of this age made it natural to approach these families and easy to obtain their cooperation. Each month a new group of families was seen. It was realized that this would give a larger proportion of children and young adults in our series than in the general population, but this seemed advantageous rather than otherwise, since these diseases are of particular importance in families with young children. In Albany, Ga., a purely random sample was obtained through selecting the first family listed on successive pages of the city directory. The same families were followed throughout one year, with additions to replace those lost by removal or uncooperativeness. Replacements

[1] From the Division of Infectious Diseases, National Institute of Health, with the cooperation of State, Insular, and local health departments of the areas in which the studies were conducted, the Indian Medical Service, and the DeLamar Institute of Public Health, Columbia University.

were made by taking the nearest cooperative neighbor. Cultures of specimens from each member of a household were made as this individual entered the study. Reports on the occurrence of diarrheal disease were obtained for all at monthly intervals, but in each family only one individual (selected at random) was requested to submit one fecal specimen per month. (3) One town and a relatively extensive surrounding rural area were selected as representative of the Puerto Rican population. Here every second household in the town and each fifth in the country comprised the study group. When replacements became necessary, the next family in order was used.

All individuals in these surveys were selected without prior knowledge of the presence or absence of diarrheal disease. Thus, "survey examination" signifies a test in which the clinical condition of the individual played no part in his being selected for study.

Fecal specimens for cultures were collected from all individuals who were willing to cooperate. Adolescent and adult males as a rule were less cooperative than females. English-speaking white families living under satisfactory economic conditions complied reluctantly, whereas most Negroes, Spanish-speaking Americans, and Indians readily agreed to follow the instructions of the nurses. The failure to cooperate appeared to be explained by the reluctance of the individual to collect fecal specimens and bore no significant relationship, insofar as we could determine, to the occurrence or nonoccurrence of diarrheal diseases. It is believed that the findings on the individuals as presented are representative of the study groups as a whole and of the general population from which they were drawn.

Histories of diarrheal disease were recorded at the time of the first visit to families included in the survey. The nurse obtained all initial reports and listed by month all disorders which had occurred in the preceding year, or, if the month could not be given, by season. The epidemiologist visited the family to obtain detailed records if any member was culturally positive or if any significant diarrhea, i. e., more than three watery fecal stools daily or any stools with gross bloody mucopurulent exudate, was occurring at the time or had occurred within three months. He made every reasonable effort to obtain directly from each culturally positive adolescent or adult information as to the presence or absence of diarrhea. Subsequent morbidity was determined in some groups through regular visits to the home by the nurse.

All fecal specimens were collected in glycerine-saline preservative, and were cultured on highly selective media by a constant technique.

Up to 1940 the desoxycholate citrate agar only was available and two plates per specimen were used; for the remainder of this study one plate each of desoxycholate citrate agar, S. S. (Shigella-Salmonella) agar, and either MacConkey's or plain desoxycholate agar were employed. Suspicious colonies were picked to Russell's double or Krumweide's triple sugar agar. Those giving "positive" or "suspicious" reactions were further studied culturally and serologically. The reported findings are based on examinations of single fecal specimens. Most individuals in New Mexico and New York City were so examined only once, but in Chilili, N. Mex., there were three survey examinations at monthly intervals in 1937 and two in 1938. In Georgia it was the usual practice to examine the same individual once a month. However, substitutions were often required and, as a result, the number of tests per individual varies. Each of these repeat examinations was tabulated as a separate survey examination.

The location and names of the communities studied, the nature of the study groups, and the dates of the respective studies are given in table 1, together with a summary of the discovered prevalence of *Shigella* infections and incidence of diarrheal disease.

PREVALENCE OF *SHIGELLA PARADYSENTERIAE* INFECTIONS

The prevalence of *Shigella paradysenteriae* found in these sample populations was 11 percent in New Mexico, 4 percent in Puerto Rico, 3 percent in Georgia, and 0.1 percent in New York City (table 1). In New Mexico the communities had rates which varied from 3 percent in the suburban area to 20 percent in the Spanish village, and in Georgia from 1 percent in urban groups to 4 and 5 percent in the rural area and village respectively. There was little difference between the town and rural section of Trujillo Alto, P. R. These relatively high prevalence rates stand in marked contrast to the two positive observations in the examination of 1,659 individuals in New York City.

The variations in prevalence by age as found in three areas (New York City omitted) are shown in table 2. Infants under 1 year of age had lower rates (5 percent) than those in the second year of life (9 percent). From 1 to 10 years the rates remained relatively constant; thereafter they decreased to about one-half of these rates. The prevalence of *Shigella* infection among individuals of different ages above 10 years did not vary significantly in this series.

Variations in prevalence by sex were slight and not significant statistically.

TABLE 1.—*Location and composition of study groups, discovered prevalence of* Shigella *infection and reported incidence of diarrheal disorders*

Area	Community		Composition of study group	Race or nationality	Date of survey	Prevalence of *Shigella paradysenteriae* infection			Incidence of diarrhea		
	Name	Character				Specimens examined	Positive		Individuals	Ill	
							Number	Percent		Number	Percent
New Mexico	Albuquerque	Urban	Families with an infant of 6 months.	(a) White ("Anglo")	June 1938–February 1939	323	15	5	323	28	9
				(b) Spanish-American.	do	790	88	11	790	74	9
	Atrisco	Suburban (semi-rural).	Residents of delimited area.	Spanish-American	July–August 1937	291	10	3	291	19	7
	Chilili	Isolated village	All willing to collect specimens.	Spanish-American	August, September, October 1937.	326	48	15	224	60	27
	Cochiti	"Pueblo"	All willing to collect specimens.	Indian	September–December 1938	192	39	20	132	25	19
					July–August 1937	189	26	14	189	25	13
					July 1938	87	13	15	87	6	7
					Total	2,198	239	11	2,036	237	12
Georgia	Albany	Urban	Representative families	White	October 1939–September 1940.	287	4	1	80	5	6
				Negro	do	1,349	24	2	549	61	6
	East Albany	Suburban	Residents of delimited area	Negro	January–August 1940	723	9	1	542	32	6
	Acree	Village	All willing to collect specimens.	White and Negro	August 1939–August 1940	681	35	5	202	15	7
	Pretoria	Rural	All willing to collect specimens.	White and Negro	July 1939–September 1940	833	33	4	191	18	9
					Total	3,873	105	3	1,564	101	6
Puerto Rico	Trujillo Alto	Town	Every second family	Puerto Rican	March–May 1941	402	13	3	402	54	13
		Rural area	Every fifth family	Puerto Rican	do	511	23	5	511	38	7
					Total	913	36	4	913	92	10
New York City	Hospital X	Urban	Patients and Staff	White	July 1939	1,448	1	0.1			
	Institution Y	Urban	Child inmates	White	March 1940	211	1	0.5			
					Total	1,659	2	0.1			

TABLE 2.—*Prevalence of* Shigella paradysenteriae *infection in general population groups in New Mexico, Georgia, and Puerto Rico, by age*

Age	Area									All areas		
	New Mexico			Georgia			Puerto Rico					
	1[1]	2[1]	3[1]	1	2	3	1	2	3	1	2	3
0	264	17	6.4	127	4	3.7	25	0	-------	416	21	5.0
1	56	10	17.9	111	8	7.2	26	0	-------	193	18	9.3
2	93	10	10.8	112	5	4.5	27	4	14.8	232	19	8.2
3	92	17	18.5	128	3	2.3	22	1	4.5	242	21	8.7
4	94	9	9.6	82	5	6.1	23	2	8.7	199	16	8.0
5–9	408	59	14.4	606	23	3.8	139	12	8.6	1,153	94	8.2
10–14	222	23	10.4	428	10	2.3	131	6	4.6	781	39	5.0
15–19	123	10	8.1	227	5	2.2	119	5	4.2	469	20	4.3
20–24	157	24	15.3	263	10	3.8	87	1	1.2	507	35	6.9
25–34	279	22	7.9	498	7	1.4	113	2	1.8	890	31	3.5
35–44	158	16	10.1	440	11	2.5	75	2	2.7	673	29	4.3
45–54	80	11	13.7	363	7	1.9	72	1	1.4	515	19	3.7
55–64	40	3	7.5	124	1	.8	33	0	-------	197	4	2.0
65 and over	37	5	13.5	143	4	2.8	19	0	-------	199	9	4.5
Unknown	98	3	3.1	220	2	.9	1	0	-------	319	5	1.6
All ages	2,201	239	10.9	3,872	105	2.7	912	36	3.9	6,985	380	5.4

[1] 1—Number of cultural examinations.
2—Number positive for *Shigella paradysenteriae.*
3—Prevalence (percent) of *Shigella paradysenteriae.*

INCIDENCE OF DIARRHEAL DISEASES

A record was obtained on all individuals of all diarrheal disorders remembered to have occurred in the preceding year. This method of study is hereafter referred to as the "historical method." In addition, in Georgia a record of diarrhea was obtained throughout the year by monthly visits to 793 individuals in 151 households. A total of 38 attacks during the preceding year was reported on the first visit, a rate of 5 percent per annum. Through the monthly reports during the following year there were reported 160 attacks, a rate of 20 percent per annum. It is believed that this reported increase was due to the obtaining of histories at short intervals, since the families concerned, as well as physicians and public health nurses, repeatedly asserted that there was less diarrhea during the study year than in the preceding one. These findings indicate that the historical method brought to light only about one-quarter of all attacks of diarrhea. In Puerto Rico, where the seasonal variation in incidence is slight, the distribution of the historically reported cases within the year was compared. The total number of remembered attacks for a full year in 913 individuals was 92, an annual rate of 10 percent. Within the month immediately preceding the taking of the history there were 46 reported attacks, an annual rate of 60 percent. Here the historical method gave a rate which was one-sixth of that indicated by the reports for the one month.

The incidence of diarrheal disease in the areas studied, as shown in table 1, is that determined by the historical method. It was 12 percent in New Mexico, 10 percent in Puerto Rico, and 6 percent in Georgia.

Information on representative family groups was not obtained in New York City, but data provided through baby health stations indicated that in most areas significant acute endemic diarrheal disorders were uncommon.

In New Mexico, the lowest incidence (7 percent) was found in a suburban community where every family had been given a sanitary privy. The high rates were found in a Spanish village and an Indian Pueblo in which the sanitary conditions were poor. The families in the city, with widely differing sanitary facilities in different wards, had an attack rate of 9 percent per annum. In Georgia, the incidence varied from 6 to 9 percent, with the high rate in a rural community and the low rate among families living under urban conditions.

The total morbidity in the groups in Georgia as determined through visiting families at monthly intervals was 20 percent. The annual rate as determined by these reports was four times that indicated by the historical method. This correction applied to New Mexico would indicate a total incidence rate of 48 percent. The computed annual attack rates in Puerto Rico, as determined by reports for 1 month, was 60 percent.

TABLE 3.—*Incidence of diarrheal disorders in study areas in New Mexico, Georgia, and Puerto Rico, by age*

Age	Area									All areas		
	New Mexico			Georgia			Puerto Rico					
	1[1]	2[1]	3[1]	1	2	3	1	2	3	1	2	3
0	261	55	21.1	53	16	30.2	25	4	16.0	339	75	22.1
1	53	23	43.4	34	16	47.1	26	10	38.4	113	49	42.4
2	89	14	15.7	42	11	26.2	27	7	25.9	158	32	20.2
3	83	15	18.1	53	13	24.5	22	7	31.8	158	35	22.1
4	90	8	8.9	38	7	18.4	23	2	8.7	151	17	11.2
5–9	367	28	7.6	204	20	9.8	139	19	13.7	710	67	9.4
10–14	198	14	7.1	182	19	10.4	131	12	9.2	511	45	8.8
15–19	111	7	6.3	121	7	5.8	119	8	6.7	351	22	6.3
20–24	144	19	13.2	149	16	10.7	87	1	1.5	380	36	9.5
25–34	272	19	7.0	203	35	17.4	113	8	7.1	588	62	10.5
35–44	148	12	8.1	162	23	14.3	75	6	8.0	385	41	10.6
45–54	68	12	17.6	112	16	14.3	72	3	4.2	252	31	12.3
55–64	37	3	8.1	45	7	15.6	33	3	9.1	115	13	11.3
65	34	5	14.7	69	6	8.7	19	2	10.5	122	13	10.7
Unknown	81	3	3.7	97	5	5.2	1	0	-------	179	8	4.5
All ages	2,036	237	11.6	1,564	217	13.9	912	92	10.0	4,512	546	12.1

[1] 1—Number of individuals on whom history of occurrence or nonoccurrence of diarrheal disease was obtained.
2—Number of reported attacks of diarrheal disease.
3—Annual attack rate (percent).

The age distribution of diarrheal disorders is given in table 3. The illnesses recorded for the Georgia study include those reported on 793 individuals through monthly visits to the family, and the remembered attacks in 771 others who were not seen repeatedly. Individuals were classified by the age of the person at the first visit. The initial histories obtained on persons under 1 year of age covered an

average period of only one-half of a year. Thus the rates as determined historically in New Mexico and Puerto Rico were not true rates for the first year of life. If one corrects for this factor, the data did not establish any difference in the incidence of the diarrheal diseases for the first and second years of life. These rates were approximately twice as high as those for the third and fourth years. That for the fifth year approached the lower level observed in older children and adults. There was no increase in incidence in the aged. The observed differences by sex at various age bands were not statistically significant.

SEASONAL VARIATIONS IN INCIDENCE OF DIARRHEA AND PREVALENCE OF *SHIGELLA PARAYSENTERIAE* INFECTIONS

The field studies in New Mexico were chiefly confined to the summer and fall. Findings from Puerto Rico included in this report were collected within a 2-month period. Only in Georgia were data obtained during each of the four seasons. These findings are given in tables 4 and 5. The clinical disorders (table 4) were largely limited to the months of May, June, July, and August. Seasonal variations in the prevalence of *Shigella* infections as determined by cultural methods were neither as marked nor as consistent as those for diarrheal diseases (table 5). In the city of Albany the findings indicated a low prevalence in February, March, and April, a beginning rise in May, the highest levels in June, July, and August, and a decline to a low level in January. In Pretoria there was a high prevalence in July

TABLE 4.—*Monthly incidence of reported diarrheal disease in 3 Georgia communities*

Month	Community						Total	
	Albany		Acree		Pretoria			
	Number ill	Percent ill	Number ill	Percent ill	Number ill	Percent ill	Number ill	Percent ill
1939								
October	2	0.4	0	------	0	------	2	0.3
November	0	------	0	------	0	------	0	------
December	2	.4	0	------	0	------	2	.3
1940								
January	1	.2	0	------	0	------	1	.1
February	1	.2	0	------	0	------	1	.1
March	3	.6	1	.7	0	------	4	.5
April	3	.6	1	.7	0	------	4	.5
May	9	1.7	10	6.6	5	4.0	24	3.0
June	16	3.1	8	5.3	4	3.2	28	3.5
July	24	4.6	7	4.6	6	4.8	37	4.7
August	32	6.2	3	2.0	15	12.0	50	6.3
September	4	.8	------	------	3	2.4	7	.9
Total	97	18.8	30	19.9	33	26.4	160	20.2
Average number persons under observation	517		151		125		793	
Average number households under observation	98		30		23		151	

TABLE 5.—*Monthly prevalence of* Shigella paradysenteriae *infections in 3 Georgia communities*

Month	Albany			Acree			Pretoria			Total		
	Examinations	Positive		Examinations	Positive		Examinations	Positive		Examinations	Positive	
		Number	Percent		Number	Percent		Number	Percent		Number	Percent
1939												
July							76	12	16.0	76	12	16.0
August				72	5	7.0	63	3	4.6	135	8	5.9
September												
October	427	8	1.9				89	0	0	516	8	1.6
November				98	2	2.0				98	2	2.0
December	189	2	1.1							189	2	1.1
1940												
January	173	1	.6	80	4	5.0	98	0	0	351	5	1.4
February	96	0	0							96	0	0
March	103	0	0				76	0	0	179	0	0
April	92	0	0	80	4	5.0	89	0	0	261	4	1.5
May	131	1	.8	86	11	12.8				217	12	5.5
June	98	4	4.1	95	4	4.2	91	0	0	284	8	2.8
July	104	7	6.7	87	4	4.6	82	0	0	273	11	4.0
August	106	3	2.8	83	1	1.2	86	15	17.4	275	19	6.9
September	117	2	1.7				83	3	3.6	200	5	2.5

1939 after an epidemic of diarrhea had subsided, and in August 1940, when diarrhea was common. In both years the level had declined in the following month. All cultures from this community were negative from October 1939 through July 1940. *Shigella* infection was found on each of the eight surveys during the year in Acree, but the month of highest prevalence was the month with the largest number of cases of diarrhea.

Observations were obtained in New Mexico during the 9 months from June 1938 through February 1939. There was no significant variation in the monthly prevalence of *Shigella* infection. Possibly that season was unusual since a variety of Flexner organisms, not endemic in the summer months, made their appearance in October and became widely distributed later.

VARIATIONS IN PREVAILING VARIETIES OF SHIGELLA

Seven groups of *Shigella* were differentiated as follows: (1) Flexner V. (2) Flexner W (serologically identical with the Oxford W type strain). (3) Flexner W′ (This did not give the same agglutination patterns as the type "W" strain but was identified as "W" by agglutinin absorption tests. Epidemiologically it was distinct.). (4) Flexner Z. (5) Flexner Z′ (This was distinguished from typical Z strains by its wider antigenic range and biochemical differences. It, too, was epidemiologically distinct.). (6) Newcastle ("Newcastle dysentery bacillus" or Boyd's "88"). (7) Sonne. A few Flexner strains were not typed.

The most common variety of *Shigella* isolated from survey cultures was Flexner and the most common type was W (table 6). In each area approximately one-third of all such isolations were typical Flexner W strains. Flexner V was rare and found only in New Mexico. Flexner Z was relatively common in New Mexico and Puerto Rico but rare in Georgia. Flexner W′ was not found in the survey group in Puerto Rico, but was not unusual in the other areas. Flexner Z′ was common in Georgia, rare in New Mexico, and not found in Puerto Rico. Newcastle was almost equally distributed in the three georgraphic areas, but the percentage of Sonne organisms varied from 3.8 in New Mexico to 16.2 in Georgia and 33.3 in Puerto Rico. In New York City, of the two positives one was Flexner W and the other Sonne. Types not found in survey groups were isolated from clinical cases in certain areas.

TABLE 6.—*Geographic distribution of different varieties of* Shigella paradysenteriae *found by survey examinations*

Area	Period	Flexner							Newcastle	Sonne	Total
		V	W	Z	W′	Z′	Not typed	Total			
New Mexico:											
Albuquerque	June–October 1938	0	17	8	1	2	0	28	4	5	37
	November 1938–February 1939.	0	28	1	25	0	0	54	12	0	66
Atrisco	1937	0	1	3	0	1	0	5	3	2	10
Chilili	1937	0	29	0	0	6	2	37	11	0	48
	1938	4	10	15	0	0	0	29	9	1	39
Cochiti	1937	0	2	21	0	0	2	25	0	1	26
	1938	0	0	6	2	0	0	8	5	0	13
Total	Number	4	87	54	28	9	4	186	44	9	239
	Percent	1.7	36.4	22.6	11.7	3.8	1.7	77.8	18.4	3.8	100.0
Georgia:											
Albany	October 1939–September 1940.	0	6	0	0	8	0	14	2	12	28
East Albany	January–August 1940	0	4	0	0	0	0	4	0	5	9
Pretoria	July–December 1939	0	1	2	3	0	0	6	9	0	15
	January–September 1940	0	0	0	0	18	0	18	0	0	18
Acree	August 1939–January 1940	0	3	1	6	1	0	11	0	0	11
	February–August 1940	0	21	0	0	0	0	21	3	0	24
Total	Number	0	35	3	9	27	0	74	14	17	105
	Percent		33.2	2.9	8.6	25.8		70.5	13.3	16.2	100.0
Puerto Rico	Number	0	11	9	0	0	0	20	4	12	36
	Percent		30.6	25.0	0	0	0	55.6	11.1	33.3	100.0

Changes in the prevailing variety of organisms were observed. Flexner Z was not found in Chilili, N. Mex., in 1937, but it was the commonest variety in 1938. Flexner W′ was not found in Albuquerque in 1938 until October but it was isolated commonly during the following four months. There were also differences between small communities in the same geographic areas. In New Mexico, in 1937, Flexner W

was the prevailing type in Chilili and Flexner Z in Cochiti. Similarly, in the spring and summer of 1940 the only type of Flexner found in Acree, Ga., was W; but in Pretoria (20 miles away and served by the same business center) only Flexner Z′ was isolated.

The range in the varieties of *Shigella* found in Acree, Ga., is shown in table 7. Flexner W′ was isolated in August and November 1939, but not thereafter. Flexner W was first encountered in November and this spread widely, with a peak in prevalence in May 1940. It was not found in the last survey, during August 1940. Newcastle was found in July and August 1940. Flexner Z and Z′ were isolated, yet disappeared without detected spread. According to our findings, in 1 year four types of *Shigella* were introduced, and during the same period four types disappeared from this community.

TABLE 7.—*Varieties of* Shigella *isolated in Acree, Ga.*

Month	Flexner				Newcastle	Total
	W′	W	Z	Z′		
1939						
August	5	0	0	0	0	5
November	1	1	0	0	0	2
1940						
January	0	2	1	1	0	4
April	0	4	0	0	0	4
May	0	11	0	0	0	11
June	0	4	0	0	0	4
July	0	2	0	0	2	4
August	0	0	0	0	1	1

CARRIER-CASE RATIOS

From these survey data it has been determined, with respect to diarrheal diseases, the number of persons ill, convalescent, or well at a point of time. The prevalence of *Shigellae* was determined culturally; routine histories concerning diarrhea were obtained each time specimens were secured. Since we were concerned particularly with studies on individuals known to be infected with *Shigella*, whenever possible all culturally positive persons were visited by the epidemiologist to get a more detailed history directly from the person involved. These data permit our estimation of case-carrier ratios within the limits of error imposed by the methods of study.

The basic observations by age are given in table 7. Individuals classified as ill had a significant diarrheal disorder on the day the stool specimen was collected. If they were well on that day but had had an attack of diarrhea within 3 months, they were classified as "convalescent." "No diarrhea" covered a period of 3 months. The miscellaneous group "others" includes (*a*) those who developed diarrhea within 1 month after examination (possible incubatory carriers), (*b*) individuals who had recovered from diarrhea within 4 to 12 months preceding examination, and (*c*) those with any history of chronic diarrhea.

There were 416 survey examinations of infants under 1 year and *Shigellae* were isolated from 21 (5 percent). These positives were distributed as follows: 8 "ill," 8 "convalescent," 2 "no diarrhea," and 3 "others." Two of the latter developed diarrhea shortly after examination and 1 had recovered 6 months previously. These and comparable data for each age group are given in table 8. The cases were

TABLE 8.—*Prevalence of* Shigella paradysenteriae *infection, by age, and clinical history of individuals examined*

Age	Number of examinations	Positive		Ill positive		Convalescent positive		No diarrhea positive		Other positive	
		Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
0	416	21	5.0	8	1.9	8	1.9	2	0.5	3	0.7
1	193	18	9.3	5	2.6	7	3.6	6	3.1	0	0
2	232	19	8.1	4	1.7	8	3.4	7	3.0	0	0
3	242	21	8.6	4	1.6	4	1.7	12	4.9	1	.4
4	199	16	8.0	0	0	2	1.0	13	6.5	1	.5
5–9	1,153	94	8.1	6	.5	13	1.1	73	6.3	2	.2
10–14	781	39	5.0	2	.3	10	1.3	26	3.3	1	.1
15–19	469	20	4.3	0	0	4	.9	15	3.2	1	.2
20–24	507	35	6.9	1	.2	11	2.2	23	4.5	0	0
25–34	890	31	3.4	2	.2	6	.7	20	2.2	3	.3
35–44	673	29	4.2	3	.4	5	.7	20	3.0	1	.1
45+	910	32	3.5	1	.1	10	1.1	18	2.0	3	.3
Unknown	319	5	.2	0	0	1	.3	4	1.3	0	0
Total	6,984	380	5.4	36	.5	89	1.3	239	3.4	16	.2

concentrated in the early ages. *Shigella* infection without disease was rare in infants, but was relatively much more common in the older age groups.

The carrier-case ratios given in table 9 vary markedly by age. They were low in children under 5 years of age and in this period pro-

TABLE 9.—*Carrier-case ratios for* Shigella *infections, by age*

Age	Convalescent and passive carriers	Current positive cases	Carriers per current case	Passive carriers	Current positive case and convalescent carriers	Carriers per current or recent case
Under 5:						
0	10	8	1.3	2	16	0.1
1	13	5	2.6	6	12	.5
2	15	4	3.8	7	12	.6
3	16	4	4.0	12	8	1.5
4	15	0		13	2	6.5
Total	69	21	3.3	40	50	.8
5 and above:						
5–9	86	6	14.3	73	19	3.8
10–14	36	2	18.0	26	12	2.2
15–19	19	0		15	4	3.8
20–24	34	1	34.0	23	12	1.9
25–34	26	2	13.0	20	8	2.5
35–44	25	3	8.3	20	8	2.5
45 and above	28	1	28.0	18	11	1.6
Total	254	15	16.9	195	74	2.6
Unknown	5	0		4	1	4.0
Total, all ages	328	36	9.1	239	125	1.9

gressively increased with age. They were higher and without significant variation in older children and adults. The ratios of passive carriers to current and recently recovered cases varied similarly with age.

The carrier-case ratios for the Flexner, Newcastle, and Sonne varieties of *Shigella* were strikingly uniform, as is shown in table 10.

TABLE 10.—*Carrier-case ratios for* Shigella *infection by variety of organisms*

Variety of *Shigella*	Convalescent and passive carriers	Current positive cases	Carriers per current case	Passive carriers	Current positive case and convalescent carriers	Carriers per current and convalescent case
Flexner:						
V	3	1	3.0	2	2	1.0
W	117	7	16.9	88	36	2.4
Z	56	9	6.2	40	25	1.6
W′	32	3	10.7	25	10	2.5
Z′	28	6	4.7	17	17	1.0
Not typed	4	0		1	3	.3
Total	240	26	9.2	173	93	1.9
Newcastle	54	6	9.0	42	18	2.3
Sonne	34	4	8.5	24	14	1.7
Total all varieties	328	36	9.1	239	125	1.9

RATIO OF MANIFEST TO HIDDEN INFECTIONS

Of the 380 culturally positive persons encountered in these surveys only 2 were under the care of a physician. One, acutely ill when found on the survey, was admitted to the hospital the following day and died 2 days later. In the absence of a special study, these 2 might have been tested culturally, and thus there would have been 2 demonstrated and 378 undetected infections with *Shigellae*. Thus, for every known infection (manifest source) there are numerous unrecognized infections (hidden source). In the light of these findings it is not surprising that endemic diarrheal diseases commonly appear to be scattered sporadic cases. These seemingly unrelated infections may arise from a single source or be joined by a series of undetected infections. This knowledge is essential for the interpretation of the epidemiology of the acute diarrheal diseases.

SUMMARY

Representative samples of the general population of New Mexico, Georgia, New York City, and Puerto Rico were cultured for *Shigellae*. Records of the occurrence of diarrheal disease were obtained by the historical method and through visiting families at monthly intervals. The average revealed prevalence of *Shigella paradysenteriae* in these areas was 11 percent in New Mexico, 4 percent in Puerto Rico, 3

percent in Georgia, and 0.1 percent in New York City. This prevalence was highest in children of 1 to 9 years of age, approximately twice that for infants or for older children and adults.

The total reported or estimated annual morbidity from the diarrheal diseases was 60 percent in Puerto Rico, 48 percent in New Mexico, 20 percent in Georgia, and markedly less in New York City. The illnesses were common in young children but decreased progressively from age 2 to 5 years.

The seasonal variation in the incidence of disease was more consistent and more marked than seasonal differences in the prevalence of *Shigellae* infections.

Infection without disease was rare in infants, and the number of carriers per case progressively increased with age up to 5 years, but thereafter significant variations were not found. For all ages there was an average of 9.1 convalescent or passive carriers for each current case. The ratio of passive carriers to current and recent cases was lower, but varied similarly by age and was strikingly uniform for the different varieties of *Shigella*.

"Manifest human sources" of *Shigella* infection were rare when compared with the number of "hidden sources" found in these surveys. Knowledge of the unrecognized infections (hidden sources) is essential for an understanding of the epidemiology of *Shigella* infections.

ACKNOWLEDGMENT

The authors wish to express their indebtedness to the late Dr. Wade H. Frost, who visualized the importance of the type of study presented here and effectively guided them during the early stages of this investigation.

DEATHS DURING WEEK ENDED FEBRUARY 10, 1945

[From the Weekly Mortality Index, issued by the Bureau of the Census, Department of Commerce]

	Week ended Feb. 10, 1945	Corresponding week, 1944
Data from 92 large cities of the United States:		
Total deaths	9,916	9,437
Average for 3 prior years	9,486	
Total deaths, first 6 weeks of year	58,972	64,598
Deaths, under 1 year of age	668	558
Average for 3 prior years	614	
Deaths under 1 year of age, first 6 weeks of year	3,800	3,851
Data from industrial insurance companies:		
Policies in force	66,964,349	66,285,379
Number of death claims	15,869	14,010
Death claims per 1,000 policies in force, annual rate	12.4	11.1
Death claims per 1,000 policies, first 6 weeks of year, annual rate	11.0	12.3

PREVALENCE OF DISEASE

No health department, State or local, can effectively prevent or control disease without knowledge of when, where, and under what conditions cases are occurring

UNITED STATES

REPORTS FROM STATES FOR WEEK ENDED FEBRUARY 17, 1945

Summary

The incidence of poliomyelitis, which had increased during each of the past 3 weeks, declined during the current week. A total of 43 cases was reported, as compared with 52 last week and 26 for the corresponding week last year, which number was also the median figure for the corresponding weeks of the past 5 years. The total to date this year is 289, a larger number than reported for the corresponding period of any other year since 1928. Of the current total, 14 cases were reported in New York, 4 in Alabama, 3 in North Carolina, and 22 in 15 other States.

A total of 281 cases of meningococcus meningitis was reported, as compared with 244 last week, 529 and 398 for the corresponding weeks, respectively, of last year and 1943, and a 5-year median of 84. Of the total for the current week, 117 cases, or 42 percent, occurred in the Middle Atlantic and East North Central areas. The cumulative total is 1,693, as compared with 3,935 and 2,456 for the corresponding periods of 1944 and 1943, respectively, and a 5-year median of 416.

Of the total of 14 cases of smallpox reported for the week, 8 occurred in Arkansas. The cumulative figure is 65, as compared with 88 for the corresponding period last year and a 5-year median of 216.

A total of 67 cases of typhoid fever was reported, 19 of which were in Pennsylvania, where 17 cases were reported last week. The total to date is 419, a smaller number than for the corresponding period of any of the past 5 years except 1943.

The current report of 77 cases of undulant fever brings the total to date to 510, as compared with 241 for the same period last year.

Two cases of anthrax and 1 case of psittacosis were reported in Pennsylvania, 1 case of anthrax in Texas, 1 case of leprosy in New York, and 1 of Rocky Mountain spotted fever in North Carolina.

A total of 9,823 deaths was recorded for the week in 92 large cities of the United States, as compared with 9,871 last week, 9,824 for the corresponding week last year, and a 3-year (1942–44) average of 9,873. The cumulative figure for the first 7 weeks of the year is 68,407, as compared with 73,898 for the corresponding period last year.

Telegraphic morbidity reports from State health officers for the week ended February 17, 1945, and comparison with corresponding week of 1944 and 5-year median

In these tables a zero indicates a definite report, while leaders imply that, although none was reported, cases may have occurred.

Division and State	Diphtheria			Influenza			Measles			Meningitis, meningococcus		
	Week ended—		Median 1940–44	Week ended—		Median 1940–44	Week ended—		Median 1940–44	Week ended—		Median 1940–44
	Feb. 17, 1945	Feb. 19, 1944		Feb. 17, 1945	Feb. 19, 1944		Feb. 17, 1945	Feb. 19, 1944		Feb. 17, 1945	Feb. 19, 1944	
NEW ENGLAND												
Maine	1	1	1	1	2	4	2	196	196	0	3	0
New Hampshire	1	0	0	----	----	----	0	3	4	0	0	0
Vermont	2	0	0	----	14	----	4	94	29	0	1	0
Massachusetts	5	4	3	----	----	----	98	462	454	7	19	4
Rhode Island	0	1	1	----	----	----	16	423	96	0	11	0
Connecticut	0	0	0	1	8	4	59	330	282	2	6	1
MIDDLE ATLANTIC												
New York	12	8	15	[1] 2	[1] 7	[1] 17	55	1,631	1,631	32	65	10
New Jersey	1	2	7	4	13	23	36	1,235	1,076	4	13	5
Pennsylvania	12	5	17	3	8	----	47	1,080	1,174	24	27	20
EAST NORTH CENTRAL												
Ohio	8	10	10	9	75	75	20	3,035	190	18	31	3
Indiana	9	15	12	10	67	67	10	266	175	6	17	2
Illinois	3	15	18	3	40	40	60	926	506	18	17	1
Michigan [2]	5	7	6	2	12	12	22	1,386	275	12	26	2
Wisconsin	0	1	1	16	202	112	27	1,810	769	3	6	0
WEST NORTH CENTRAL												
Minnesota	4	4	4	2	5	2	13	1,082	366	3	4	1
Iowa	4	7	4	----	3	3	35	133	162	4	15	0
Missouri	6	7	5	4	8	8	15	212	86	10	23	1
North Dakota	1	1	1	20	10	20	3	299	28	3	2	0
South Dakota	3	0	0	1	----	1	21	128	31	0	0	0
Nebraska	5	2	2	50	1	3	15	82	82	0	1	0
Kansas	6	3	3	9	1	17	13	555	333	2	9	5
SOUTH ATLANTIC												
Delaware	0	1	1	----	----	----	7	8	8	0	1	0
Maryland [3]	8	6	3	8	28	28	75	662	60	4	12	5
District of Columbia	3	0	1	1	----	4	7	112	34	5	1	1
Virginia	5	2	7	559	601	601	44	904	378	7	25	6
West Virginia	5	2	5	29	60	60	8	496	112	5	5	0
North Carolina	12	12	12	----	48	59	45	1,136	257	7	7	2
South Carolina	1	6	4	687	801	801	18	279	64	5	6	1
Georgia	9	2	4	17	164	205	15	383	268	2	5	1
Florida	5	5	5	----	68	50	11	183	58	3	2	2
EAST SOUTH CENTRAL												
Kentucky	14	1	5	10	188	136	6	0	54	14	8	2
Tennessee	5	5	9	101	203	203	65	273	125	7	33	4
Alabama	9	9	8	230	177	453	28	339	140	4	17	3
Mississippi [3]	13	2	6	----	----	----	----	----	----	6	7	2
WEST SOUTH CENTRAL												
Arkansas	7	5	5	145	336	458	17	150	150	10	5	0
Louisiana	16	7	6	7	122	122	24	84	57	3	7	2
Oklahoma	9	4	4	248	276	276	41	112	30	5	4	0
Texas	43	31	41	2,043	2,736	1,910	310	731	463	19	14	13
MOUNTAIN												
Montana	0	0	6	22	83	8	8	253	168	0	1	0
Idaho	0	1	1	----	----	----	2	53	38	1	0	0
Wyoming	0	2	0	----	7	33	2	110	43	0	0	0
Colorado	9	5	7	60	79	79	39	297	206	3	5	2
New Mexico	2	1	1	3	2	2	6	16	21	0	2	0
Arizona	3	5	5	73	168	168	4	158	21	1	0	0
Utah [3]	0	0	0	61	384	57	82	16	55	0	0	0
Nevada	0	0	0	----	----	----	1	0	2	0	0	0
PACIFIC												
Washington	5	4	4	1	10	8	99	215	215	4	7	1
Oregon	0	2	3	7	65	37	57	84	193	1	5	1
California	38	27	20	23	117	117	683	621	383	17	54	4
Total	309	240	283	4,472	7,199	7,199	2,275	23,043	16,334	281	529	84
7 weeks	2,368	1,804	2,186	30,581	294,840	98,737	11,091	114,762	80,610	1,693	3,935	416

[1] New York City only.

[3] Period ended earlier than Saturday.

Telegraphic morbidity reports from State health officers for the week ended February 17, 1945, and comparison with corresponding week of 1944 and 5-year median—Con.

Division and State	Poliomyelitis			Scarlet fever			Smallpox			Typhoid and paratyphoid fever[2]		
	Week ended—		Median 1940–44	Week ended—		Median 1940–44	Week ended—		Median 1940–44	Week ended—		Median 1940–44
	Feb. 17, 1945	Feb. 19, 1944		Feb. 17, 1945	Feb. 19, 1944		Feb. 17, 1945	Feb. 19, 1944		Feb. 17, 1945	Feb. 19, 1944	
NEW ENGLAND												
Maine	0	0	0	46	28	19	0	0	0	3	1	0
New Hampshire	0	0	0	2	11	5	0	0	0	0	1	0
Vermont	0	0	0	11	4	13	0	0	0	0	0	0
Massachusetts	2	1	0	312	490	373	0	0	0	3	0	1
Rhode Island	0	0	0	32	17	14	0	0	0	0	1	0
Connecticut	0	0	0	91	104	71	0	0	0	1	0	0
MIDDLE ATLANTIC												
New York	14	2	2	540	574	507	0	0	0	4	8	4
New Jersey	0	0	0	139	141	154	0	0	0	2	1	0
Pennsylvania	1	0	0	534	318	320	0	0	0	19	2	2
EAST NORTH CENTRAL												
Ohio	1	0	0	407	365	365	0	0	0	1	2	2
Indiana	1	0	0	224	225	179	1	0	1	[4]2	28	3
Illinois	0	0	1	395	361	361	0	2	0	0	1	2
Michigan[3]	0	1	1	268	218	218	1	0	0	0	3	2
Wisconsin	0	0	0	210	355	219	1	0	0	0	0	0
WEST NORTH CENTRAL												
Minnesota	0	0	0	83	215	82	0	0	0	1	0	0
Iowa	0	0	0	59	168	75	0	1	1	0	0	0
Missouri	2	0	0	203	78	80	1	0	1	1	3	1
North Dakota	1	0	0	23	43	22	0	0	0	2	0	0
South Dakota	0	1	0	12	32	30	0	0	1	0	0	0
Nebraska	0	0	0	88	54	31	0	0	0	0	0	0
Kansas	0	0	0	123	88	88	0	0	0	0	0	1
SOUTH ATLANTIC												
Delaware	0	0	0	17	9	16	0	0	0	0	0	0
Maryland[3]	2	0	0	256	178	78	0	0	0	0	0	1
District of Columbia	0	1	0	67	221	24	0	0	0	0	0	0
Virginia	2	0	0	129	76	33	0	0	0	1	2	2
West Virginia	1	0	0	63	64	37	0	0	0	0	3	1
North Carolina	3	1	1	101	33	47	0	0	0	1	1	1
South Carolina	0	0	0	8	13	11	0	0	0	2	0	0
Georgia	0	1	0	28	12	18	2	0	0	2	2	2
Florida	0	0	0	7	12	9	0	0	0	3	1	2
EAST SOUTH CENTRAL												
Kentucky	0	1	1	88	91	81	0	0	0	0	2	1
Tennessee	0	0	1	96	66	80	0	0	0	2	3	3
Alabama	4	0	0	42	22	15	0	0	0	0	1	1
Mississippi[3]	1	1	1	44	4	6	0	0	1	1	1	2
WEST SOUTH CENTRAL												
Arkansas	0	0	0	24	13	9	8	0	0	2	1	1
Louisiana	0	1	1	18	3	6	0	0	0	2	2	3
Oklahoma	0	0	0	35	27	23	0	0	0	0	1	1
Texas	2	2	2	151	77	68	0	4	4	8	14	4
MOUNTAIN												
Montana	1	0	0	11	55	37	0	0	0	0	0	0
Idaho	0	1	1	69	40	12	0	0	0	0	0	0
Wyoming	0	0	0	5	10	10	0	0	0	0	0	0
Colorado	1	1	0	125	57	57	0	0	0	0	1	0
New Mexico	0	0	0	32	16	7	0	1	0	1	0	0
Arizona	0	0	0	37	30	8	0	0	0	0	1	0
Utah[3]	0	0	1	71	158	48	0	0	0	0	0	0
Nevada	0	0	0	10	0	0	0	0	0	0	0	0
PACIFIC												
Washington	2	2	0	88	221	57	0	0	0	1	0	0
Oregon	0	0	0	40	103	17	0	0	0	0	2	1
California	2	9	3	423	270	163	0	0	0	2	2	3
Total	43	26	26	5,887	5,770	4,069	14	8	38	67	91	64
7 weeks	289	185	213	35,958	34,004	26,048	65	88	216	[4]419	586	539

[3] Period ended earlier than Saturday.

[2] Including paratyphoid fever reported separately, as follows: Massachusetts, 2; New York, 2; Texas, 3; Washington, 1.

[4] Corrected report: Indiana, week ended Jan. 27, 1945, typhoid fever, 2 cases.

Telegraphic morbidity reports from State health officers for the week ended February 17, 1945, and comparison with corresponding week of 1944 and 5-year median—Con.

Division and State	Whooping cough			Week ended February 17, 1945							
	Week ended—			Dysentery			Encephalitis, infectious	Rocky Mt. spotted fever	Tularemia	Typhus fever	Undulant fever
	Feb. 17, 1945	Feb. 19, 1944	Median 1940–44	Amebic	Bacillary	Unspecified					
NEW ENGLAND											
Maine	36	4	34	0	0	0	0	0	0	0	1
New Hampshire	0	0	3	0	0	0	0	0	0	0	0
Vermont	27	23	27	0	0	0	0	0	0	0	2
Massachusetts	142	73	164	0	1	0	1	0	0	0	0
Rhode Island	23	16	8	0	0	0	0	0	0	0	0
Connecticut	45	18	45	0	0	0	0	0	0	0	3
MIDDLE ATLANTIC											
New York	221	143	350	6	2	0	1	0	0	0	6
New Jersey	76	34	120	3	0	0	0	0	0	0	0
Pennsylvania	192	117	209	0	0	0	1	0	0	0	4
EAST NORTH CENTRAL											
Ohio	128	97	180	1	0	0	0	0	0	0	2
Indiana	24	43	34	0	0	0	0	0	0	0	2
Illinois	47	51	106	0	3	0	0	0	2	0	0
Michigan [2]	57	75	234	0	0	0	0	0	0	0	2
Wisconsin	79	82	137	0	0	0	0	0	0	0	3
WEST NORTH CENTRAL											
Minnesota	32	22	38	0	1	0	0	0	0	0	7
Iowa	4	19	19	0	0	0	0	0	1	0	4
Missouri	25	13	9	0	0	2	2	0	1	0	2
North Dakota	1	2	5	0	0	0	0	0	0	0	0
South Dakota	5	2	5	0	0	0	0	0	0	0	1
Nebraska	15	25	5	0	0	0	0	0	0	0	0
Kansas	33	27	46	1	0	0	1	0	0	0	2
SOUTH ATLANTIC											
Delaware	5	0	9	0	0	0	0	0	0	0	0
Maryland [2]	49	18	85	0	0	1	0	0	0	0	0
District of Columbia	10	1	10	0	0	0	0	0	0	0	0
Virginia	32	23	56	0	0	26	0	0	0	0	0
West Virginia	52	29	34	0	0	0	0	0	0	0	0
North Carolina	89	126	131	0	0	0	0	1	1	1	0
South Carolina	38	51	51	2	10	0	0	0	0	0	0
Georgia	11	0	18	0	2	0	0	0	2	6	2
Florida	19	60	19	1	0	0	0	0	0	4	0
EAST SOUTH CENTRAL											
Kentucky	22	39	50	0	0	0	0	0	0	0	0
Tennessee	16	24	37	0	0	1	1	0	0	1	0
Alabama	9	5	25	0	0	0	0	0	0	6	0
Mississippi [2]	----	----	----	0	0	0	0	0	0	2	1
WEST SOUTH CENTRAL											
Arkansas	20	10	8	0	0	0	0	0	1	0	5
Louisiana	31	7	7	0	0	0	0	0	0	2	1
Oklahoma	4	1	9	1	2	0	0	0	0	0	0
Texas	313	118	162	0	369	29	0	0	0	17	7
MOUNTAIN											
Montana	20	5	5	0	0	0	0	0	0	0	0
Idaho	0	1	5	0	0	0	0	0	0	0	0
Wyoming	5	3	3	0	0	0	0	0	0	0	0
Colorado	31	21	21	0	1	0	0	0	0	0	2
New Mexico	9	3	19	0	0	1	0	0	0	0	0
Arizona	25	15	16	0	0	13	0	0	0	0	0
Utah [2]	10	16	19	0	0	0	0	0	0	0	0
Nevada	0	0	0	0	0	0	0	0	0	0	0
PACIFIC											
Washington	32	49	49	0	0	0	0	0	0	0	5
Oregon	16	29	19	0	0	0	0	0	0	0	3
California	245	64	185	2	6	0	1	0	0	0	10
Total	2,325	1,604	3,623	17	397	73	8	1	8	39	77
Same week, 1944	1,604	----	----	14	153	61	9	0	9	25	22
Average, 1942–44	2,997	----	----	18	131	40	9	[3]0	10	[3]25	20
7 weeks, 1945	15,936	----	----	189	4,335	945	42	3	176	425	510
1944	12,649	----	----	143	1,538	381	63	1	80	324	241
Average, 1942–44	22,987	----	[3] 27,046	130	1,058	296	57	[3]3	130	[3]324	202

[2] Period ended earlier than Saturday.
[3] 5-year median, 1940–44.

Anthrax.—Cases: Pennsylvania, 2; Texas, 1.
Leprosy.—Cases: New York, 1.

NOTIFIABLE DISEASES, FOURTH QUARTER 1944 [1]

The figures in the following table are the totals of the monthly morbidity reports received from the State health authorities for October, November, and December 1944. These reports are preliminary and the figures are therefore more or less incomplete. In most instances they include cases reported in both civilian and military populations. The comparisons made are with similar preliminary reports; but owing to population shifts and the presence of large military populations in certain States, the figures for some States are not comparable with those for prior years, especially for certain diseases. Each State health officer has been requested to include in the monthly report for his State all diseases that are required by law or regulation to be reported in the State. The lists of diseases required to be reported are not the same for each State. Only 12 of the common communicable diseases are notifiable in all the States. In some instances cases are reported, in some States, of diseases that are not required by law or regulation to be reported, and the figures are included although manifestly incomplete. There are also variations among the States in the degree of completeness of reporting of cases of the reportable diseases. As compared with the deaths, incomplete case reports are obvious for such diseases as malaria, pellagra, pneumonia, and tuberculosis, while in many States other diseases, such as puerperal septicemia and Vincent's infection, are not reportable.

In spite of these known deficiencies, however, these monthly reports, which are published quarterly and annually in consolidated form, have proved of value in presenting early information regarding the reported incidence of a large group of diseases and in indicating a trend by providing a comparison with similar preliminary figures for prior years. To some extent they also give a picture of the geographic prevalence of certain diseases, as the States are arranged by geographic location.

Leaders are used in the table to indicate that no case of the disease was reported.

Consolidated monthly State morbidity reports for October, November, and December, 1944

Division and State	Anthrax	Chickenpox	*Conjunctivitis [2]	*Diphtheria	Dysentery, amebic	Dysentery, bacillary	Dysentery, undefined	Encephalitis, infectious	German measles	Hookworm disease	Influenza	Malaria	*Measles	*Meningitis, meningococcus	Mumps	Ophthalmia neonatorum	Pellagra	Pneumonia, all forms
NEW ENGLAND																		
Maine		705		3		1			26		5	2	39	12	118			114
New Hampshire	1	85				2			6				133	3	97			7
Vermont		585				2			45		18		21	1	313			12
Massachusetts		2,801	59	76		68		6	179			128	866	79	2,619	40		554
Rhode Island		368		12		11		1	8		240	152	23	14	495			65
Connecticut		1,270	39	3	1	39		2	44		19	14	150	47	578			572
MIDDLE ATLANTIC																		
New York		4,008		93	22	517		12			[3] 25	[4] 235	481	282	502	16		3,575
New Jersey		6,155		61	48	2		4	132		39	285	150	106	839	1		838
Pennsylvania	2	5,891		132	1	1		3			28	1	367	156	2,226	6		701
EAST NORTH CENTRAL																		
Ohio		4,114		140	1	7		3	56		79	31	154	152	709	98	1	638
Indiana		882	1	136	3	1	5	2	11		74	112	60	40	168			40
Illinois		2,320		55	41	43		8	88		83	1	266	160	1,006	131		1,567
Michigan		4,722	51	214	7	80		1	119	1	16	29	177	129	861	7		507
Wisconsin		6,838		27	14			1	146		132	62	265	49	1,616			267
WEST NORTH CENTRAL																		

Michigan		4,722	51	214	7	80		1	119	1	16	29	177	129	861	7		507
Wisconsin		6,838		27	14			1	146		132	62	265	49	1,616			267
WEST NORTH CENTRAL																		
Minnesota		1,880		263	38	245	2	3			17	15	121	40				96
Iowa		507		76	2			1	6		1	116	125	18	326			69
Missouri		307		63			20	1			30	105	25	72	56			388
North Dakota		376		115				3			48	4	15	5				205
South Dakota		214		16	1			2					30	6	12			4
Nebraska		381		30							80		79	7	126			26
Kansas		1,495	9	59	4	4		5	105		22	6	105	16	1,048			198
SOUTH ATLANTIC																		
Delaware		30		4								2	22	7	18			12
Maryland		795	13	77	5	7	1	1	23		35	[6] 7	40	50	275	1		545
District of Columbia		257			1	9					14	77	26	18	27			205
Virginia		392		133	1		1,564				2,122	236	85	46	66		5	554
West Virginia		292		47	3		1				160		104	17	143			24
North Carolina		664		328	1	3					59	13	114	27			2	34
South Carolina		230		500	5	97		1	41	212	3,800	1,610	47	20	275	5	85	769
Georgia		242	13	238	8	22				756	366	117	48	22	100		5	211
Florida		135	14	126	22	12	2	4	13	1,560	19	219	38	34	144	6		356
EAST SOUTH CENTRAL																		
Kentucky		410		87		10		1			25	54	22	30	42		1	145
Tennessee		239	1	148	6		33	5	14	1	210	33	187	58	246	3	9	378
Alabama		158		358	25			1	16		511	662	25	42	189		6	680
Mississippi		1,254		266	274	1,629				1,235	13,559	3,457	326	42	780	21	514	3,494
WEST SOUTH CENTRAL																		
Arkansas		179		155	12	166		3	10	2	649	296	45	16	80	1	8	363
Louisiana		37		224		6			11	45	63	274	37	20	99	16		276
Oklahoma		163		184		68		3			351	365	60	13	93		16	208
Texas	1	1,912		787	283	6,597	294	11			13,815	1,638	437	104	817	13	157	2,344
MOUNTAIN																		
Montana		1,045	67	37	2	25	1		24		103	5	29	5	298			71
Idaho		457	15	8					7		31	2	28	5	39			10
Wyoming		341	105	13					21		132	2	23	2	51			27
Colorado	1	1,855		58	1	2		3	7		183		95	11	378			173
New Mexico		76		78	9	50	39	3	7		8	2	6	7	47			141
Arizona		205		18	2		264	7	24		926	18	28	11	26		6	239
Utah		1,703				2			38		57	78	106	12	568			47
Nevada		160	10								2		21	2	117			22
PACIFIC																		
Washington		1,754	3	168		3		8	179		38	1	315	39	1,147			434
Oregon		456		80	4			1			130	[6] 24	366	22	280			204
California		6,465	10	403	32	143		25	910		255	391	2,738	181	6,022			948
Total	5	67,810	410	6,101	888	9,874	2,226	135	2,316	3,812	38,579	10,881	9,070	2,257	26,082	365	815	23,357
Fourth quarter, 1943	17	65,217	190	5,458	807	6,874	1,569	145	2,965	3,863	328,994	9,911	60,125	3,484	23,233	380	978	40,570
Median, 1939–43	17	67,016		6,761	615	3,839	388	145	[7] 3,204	5,989	53,034	13,638	39,231	431	23,923	368	1,500	31,301
Alaska		88		37			5		1		25		1		13			15
Hawaii Territory		145	3	22	37	68		1	25	9	26	[6] 72	5,426	13	200			[6] 22
Panama Canal Zone [10]		71		20	14	20						192	4	1	23			[11] 65

For footnotes, see following page.

Consolidated monthly State morbidity reports for October, November, and December 1944—Continued

Division and State	*Poliomyelitis	Rabies in animals	Rabies in man	Rocky Mountain spotted fever	*Scarlet fever	Septic sore throat	*Smallpox	Tetanus	Trachoma	Trichinosis	*Tuberculosis, all forms	Tuberculosis, respiratory	Tularemia	*Typhoid and paratyphoid fever	Paratyphoid fever	Typhus fever	*Undulant fever	Vincent's infection	*Whooping cough
NEW ENGLAND																			
Maine	9				475	11		1			161	144		9	4		11	17	374
New Hampshire	10				154	5					38			4	3			5	35
Vermont	8				97						10			2			11	12	412
Massachusetts	145				2,288	43		8	3	11	685	645		32	24	2	10		1,252
Rhode Island	3				181	2					116	115		4	3		[12] 7	2	209
Connecticut	83				433	24		1		7	319	309	1	11			21		805
MIDDLE ATLANTIC																			
New York	1,522	83	1	4	2,888	92		5		12	3,110	2,826	1	58	13	4	68		2,745
New Jersey	157				807	19		4		7	744		1	19	6	1	18		973
Pennsylvania	303			2	2,417						931		3	71			13		1,544
EAST NORTH CENTRAL																			
Ohio	332	127		3	3,145	5	4	4	1	19	1,473	1,443	26	36	5	2	27	8	1,406
Indiana	53		1		925	5	9		4		953	915	29	19	1		19	48	128
Illinois	177	37			2,231	55	1	12	29	1	1,602	1,464	74	25	2		96	90	768
Michigan	156	8			2,018	126	2	11	1		1,540			29	15	1	27		786
Wisconsin	43				1,065	8	5				529		2	7			57		959
WEST NORTH CENTRAL																			
Minnesota	157	2			713	23		1			674			6	2		58	8	419
Iowa	80	31			581	3	1				154	154	1	7	2		67	6	563
Missouri	95	4		1	558	2	5		104		468		6	13			5	1	218
North Dakota	6				162	2	3		19		54	51					1	31	100
South Dakota	3				117				11		41			6			7		67
Nebraska	39				343		3				47			1					57
Kansas	17	12	1	1	1,141	7	5	7	1		125	120	5	10			39	23	345
SOUTH ATLANTIC																			
Delaware	35				50						36	36	3	2	1		1		25
Maryland	78	18	1		1,075	15				1	673	652	5	21	2	[13] 1	3	10	884
District of Columbia	37	26	2		293						487	468		4	1		1		63
Virginia	157		1	5	866	398		2	1		320	320	18	29		10	3		402
West Virginia	69			1	943	4	1				417		4	19			2		169
North Carolina	110		1	3	970	17					434	421	1	24		83	2		840
South Carolina	15	43			132	16		2			129		1	19	3	69	2		444
Georgia	24				378	83	2	4		3	367	364	4	53	25	409	29	32	166
Florida	19	1			104	11		4			289	97		27	5	121	12	116	133
EAST SOUTH CENTRAL																			
Kentucky	104			1	557	15	1				610	601	45	30	1		12		165
Tennessee	29		1	3	888	36		7			1,024		17	35	2	45	13	33	205
Alabama	13	64		1	357		2	8			577			14		240	20		212
Mississippi	15			2	278				19		413	405	11	28		55	6		1,470

Alabama	13	64		1	357		2	8			577			14		240	20		212
Mississippi	15			2	278				19		413	405	11	28		55	6		1,470
WEST SOUTH CENTRAL																			
Arkansas	17	36			257	213	4	2	83		247		2	38	1	9	8		497
Louisiana	12	24	1		169	15	3	7			396	391	4	44	4	75	12		15
Oklahoma	10		1		286	33					835		1	15			7		78
Texas	62	132	2		1,032	427			50		1,541		8	117	16	461	121		1,837
MOUNTAIN																			
Montana	8				205	16	2		1		132	47	1	8		1	5	1	249
Idaho	7				514	48	6		1		42	38		6			1	1	44
Wyoming	3				106		1		4		18	3		1			1	8	110
Colorado	11				644	15	6				130		2	14	3		5	18	161
New Mexico	10	1			205				1		[14] 540	[15] 525		21	1		2		13
Arizona	4				126				142		296			21	1		2		137
Utah	8	2	1		248	4			1		42	28	3	3	2		5		119
Nevada	1				33	11	1		2		24	7		17	1		1	14	
PACIFIC																			
Washington	74				768	19		1	2		454	159		14			16	35	185
Oregon	61				401	14					156		1	13			[16] 255	57	118
California	165	166			3,101	1		17	10	6	2,805	2,554	2	46	10	18	82		1,498
Total	4,606	817	14	27	37,725	1,843	67	108	490	67	27,208	15,302	282	1,052	159	1,607	1,191	576	24,204
Fourth quarter, 1943	3,222	540	6	25	36,998	1,461	108	121	687	57	28,091	16,267	162	1,272	124	1,494	909	887	31,671
Median, 1939–43	2,508	551	8	21	32,746	1,945	218	119	808	66	24,175	13,652	571	2,007		978	781	560	40,783
Alaska					4	13					98	89		1				13	1
Hawaii Territory	1				5	5		4	2		247	225		8	5	46	2		6
Panama Canal Zone [10]	1										[11] 5	[11] 5		20	18				[11] 5

* Diseases marked with an asterisk (*) are reportable by law or regulation in all the States, including the District of Columbia. Typhoid fever is reportable in all the States: paratyphoid fever in all except 6 States. Syphilis is reportable in all the States and the District of Columbia but is not included in the table.

[1] For reports for first, second, and third quarters of 1944, see pages 816, 1150, and 1622 of the PUBLIC HEALTH REPORTS of June 23, September 1, and December 15, 1944, respectively.

[2] Includes cases of suppurative and kerato conjunctivitis and of pink eye.

[3] New York City only.

[4] Includes 68 cases with infection contracted outside the State of New York.

[5] Contracted outside the United States.

[6] 19 recurrent cases were also reported.

[7] 4-year (1940–43) average.

[8] Includes 39 offshipping cases.

[9] Lobar pneumonia only.

[10] Includes the cities of Colon and Panama.

[11] In the Canal Zone only.

[12] Includes 3 cases, delayed reports.

[13] Tsutsugamushi fever.

[14] Includes 417 cases, out-of-State origin.

[15] Includes 410 cases, out-of-State origin.

[16] Includes delayed reports.

Actinomycosis: Illinois 1, Michigan 1, Minnesota 2, Iowa 1.

Botulism: New York 4, California 1.

Coccidioidomycosis: New Mexico 1, Arizona 1, California 7.

Dengue: South Carolina 2, Alabama 1, Texas 1, Hawaii Territory 7.

Diarrhea and enteritis: New Jersey 4 (diarrhea only), Ohio 230, Illinois 2 (diarrhea only), Michigan 14 (diarrhea only), Minnesota 1, Maryland 27 (diarrhea only), South Carolina 1,528 (diarrhea only), Florida 9 (diarrhea only), Colorado 1, New Mexico 133, Washington 61 (diarrhea only), California 36 (diarrhea only.).

Dog bite: Illinois 2,011, Michigan 1,611, Arkansas 123.

Favus: Michigan 1.

Food poisoning: Maine 5, Indiana 2, Illinois 1, New Mexico 2, Nevada 1, California 177.

Granuloma, unspecified: Ohio 5.

Granuloma inguinale: Missouri 6, Florida 51, Tennessee 5, Mississippi 153, Louisiana 13, Washington 12.

Impetigo contagiosa: Indiana 12, Illinois 24, Michigan 643, Iowa 9, North Dakota 3, Kansas 33, Maryland 1, Montana 8, Wyoming 6, Colorado 8, Nevada 12, Washington 174, Oregon 132, Alaska 1, Hawaii Territory 19.

Jaundice (including hepatitis): Indiana 5, Illinois 13, Minnesota 1, Kansas 4, Maryland 1, South Carolina 4, Florida 7, Wyoming 2, Utah 8, Nevada 1, Washington 28, California 88, Hawaii Territory 6.

Leprosy: New York 1, Florida 1, Louisiana 2, Texas 1, California 3, Hawaii Territory 4.

Lymphocytic choriomeningitis: Illinois 1.

Lymphogranuloma venereum: Missouri 7, Florida 48, Tennessee 16, Louisiana 46, Nevada 2.

Psittacosis: California 1.

Puerperal septicemia: Tennessee 3, Mississippi 44, Louisiana 1, New Mexico 1, Nevada 1.

Rat-bite fever: Kansas 3.

Relapsing fever: Kansas 1, Texas 2, Nevada 1, California 5.

Rheumatic fever: Rhode Island 1, Indiana 2, Illinois 71, Michigan 83, Iowa 2, North Dakota 1, Maryland 40, South Carolina 20, Georgia 10, Louisiana 2, Idaho 1, Colorado 20, Utah 62, Washington 15, California 153.

Ringworm: New Hampshire 1, Pennsylvania 227, Michigan 2,081, Montana 1, Washington 122.

Scabies: New Hampshire 3, Indiana 10, Michigan 399, Iowa 1, North Dakota 18, Kansas 50, Montana 19, Wyoming 11, Oregon 168.

Silicosis: Ohio 2, Indiana 14, Idaho 2.

Weil's disease: Ohio 1, Michigan 35, Maryland 2, Hawaii Territory 8.

WEEKLY REPORTS FROM CITIES

City reports for week ended February 10, 1945

This table lists the reports from 89 cities of more than 10,000 population distributed throughout the United States, and represents a cross section of the current urban incidence of the diseases included in the table.

	Diphtheria cases	Encephalitis, infectious, cases	Influenza		Measles cases	Meningitis, meningococcus, cases	Pneumonia deaths	Poliomyelitis cases	Scarlet fever cases	Smallpox cases	Typhoid and paratyphoid fever cases	Whooping cough cases
			Cases	Deaths								
NEW ENGLAND												
Maine:												
Portland	0	0	-----	0	2	1	0	0	3	0	0	3
New Hampshire:												
Concord	0	0	-----	0	5	0	1	0	2	0	0	0
Massachusetts:												
Boston	1	0	-----	3	24	5	13	0	58	0	0	31
Fall River	0	0	-----	0	0	0	3	0	2	0	0	1
Springfield	0	0	-----	0	1	1	1	0	6	0	0	5
Worcester	0	0	-----	0	2	0	8	0	11	0	0	3
Rhode Island:												
Providence	0	0	1	0	0	0	2	0	8	0	0	20
Connecticut:												
Bridgeport	0	0	1	1	0	0	3	0	1	0	0	0
Hartford	0	0	-----	0	19	0	0	0	22	0	1	1
New Haven	0	0	-----	0	0	1	2	0	3	0	0	10
MIDDLE ATLANTIC												
New York:												
Buffalo	0	0	-----	0	1	0	3	0	9	0	0	0
New York	11	0	3	0	17	19	76	1	262	0	2	98
Rochester	0	0	-----	0	4	2	2	0	6	0	0	22
Syracuse	0	0	-----	0	0	0	2	0	6	0	0	14
New Jersey:												
Camden	0	0	-----	0	0	0	2	0	4	0	1	0
Newark	0	0	1	0	5	1	7	0	16	0	0	4
Trenton	0	0	-----	0	0	0	2	0	6	0	0	0
Pennsylvania:												
Philadelphia	2	0	3	2	21	3	29	0	145	0	8	41
Pittsburgh	2	0	2	2	2	6	24	0	27	0	1	11
Reading	0	0	-----	0	2	0	1	0	2	0	0	0
EAST NORTH CENTRAL												
Ohio:												
Cincinnati	0	0	-----	0	0	0	11	0	30	0	0	11
Cleveland	0	0	3	1	2	3	9	0	58	0	0	27
Columbus	0	0	-----	0	4	2	3	0	9	0	0	7
Indiana:												
Fort Wayne	0	0	-----	0	0	0	2	0	13	0	0	4
Indianapolis	4	0	-----	1	4	0	5	0	31	0	0	1
South Bend	0	0	-----	0	0	0	0	0	2	0	0	0
Terre Haute	0	0	-----	0	0	0	6	0	1	0	0	0
Illinois:												
Chicago	0	1	4	3	24	10	39	0	143	0	0	44
Springfield	0	0	-----	0	3	0	1	0	9	0	1	7
Michigan:												
Detroit	4	0	2	3	6	5	22	0	95	0	0	23
Flint	0	0	-----	0	2	0	1	0	13	0	0	0
Grand Rapids	0	0	-----	0	1	0	2	0	10	0	0	0
Wisconsin:												
Kenosha	0	0	-----	0	1	0	0	0	1	0	0	20
Milwaukee	1	0	-----	0	2	2	0	0	40	0	0	8
Racine	0	0	-----	0	1	0	0	0	2	0	0	0
Superior	0	0	-----	0	2	0	0	0	1	0	0	10
WEST NORTH CENTRAL												
Minnesota:												
Duluth	1	1	-----	0	1	0	2	0	9	0	0	1
Minneapolis	2	0	-----	0	0	0	2	0	20	0	0	5
St. Paul	1	0	-----	1	1	0	5	0	4	0	0	7
Missouri:												
Kansas City	1	0	-----	2	0	1	16	0	19	0	0	1
St. Joseph	1	0	-----	0	1	1	0	0	23	0	0	0
St. Louis	0	1	2	0	4	4	13	0	35	0	1	4

City reports for week ended February 10, 1945—Continued

	Diphtheria cases	Encephalitis, infectious, cases	Influenza		Measles cases	Meningitis, meningococcus, cases	Pneumonia deaths	Poliomyelitis cases	Scarlet fever cases	Smallpox cases	Typhoid and paratyphoid fever cases	Whooping cough cases
			Cases	Deaths								
WEST NORTH CENTRAL—continued												
North Dakota:												
Fargo	1	0	------	0	0	0	1	0	1	0	0	0
Nebraska:												
Omaha	1	0	------	0	3	0	2	0	21	0	0	0
Kansas:												
Topeka	1	0	------	0	0	0	0	0	10	0	0	2
Wichita	0	0	------	0	1	0	4	0	15	0	0	0
SOUTH ATLANTIC												
Delaware:												
Wilmington	0	0	------	0	0	0	5	0	0	0	0	0
Maryland:												
Baltimore	6	0	4	2	4	0	19	0	75	0	1	37
Cumberland	0	0	------	0	0	0	0	0	9	0	0	1
Frederick	0	0	------	0	0	0	1	0	1	0	0	0
District of Columbia:												
Washington	0	0	3	2	6	1	11	1	69	0	1	10
Virginia:												
Lynchburg	0	0	------	0	0	0	0	0	7	0	0	0
Richmond	1	0	2	2	1	1	4	0	15	0	0	0
Roanoke	0	0	------	0	0	0	2	0	3	0	0	0
West Virginia:												
Charleston	0	0	------	0	0	0	0	0	1	0	0	0
Wheeling	0	0	------	0	0	0	1	0	0	0	0	0
North Carolina:												
Raleigh	0	0	------	0	1	0	2	0	2	0	0	3
Wilmington	0	0	------	0	0	0	1	0	4	0	0	4
Winston-Salem	0	0	------	0	0	0	1	0	19	0	0	3
South Carolina:												
Charleston	0	0	37	2	4	0	2	0	3	0	0	0
Georgia:												
Atlanta	2	0	1	0	0	0	4	0	6	0	0	0
Brunswick	0	0	------	0	2	1	1	0	3	0	0	0
Savannah	1	0	7	2	0	0	0	0	1	0	0	0
Florida:												
Tampa	2	0	1	0	1	0	4	0	2	0	0	0
EAST SOUTH CENTRAL												
Tennessee:												
Memphis	0	0	6	2	11	2	7	0	11	0	0	0
Nashville	1	0	------	1	0	3	4	0	3	0	0	1
Alabama:												
Birmingham	1	0	1	0	0	0	8	0	4	0	0	0
Mobile	0	0	1	0	0	0	3	0	0	0	0	0
WEST SOUTH CENTRAL												
Arkansas:												
Little Rock	0	0	1	0	0	0	2	0	2	0	0	3
Louisiana:												
New Orleans	1	0	6	4	0	1	16	0	8	0	0	2
Shreveport	0		------	0	0	0	7		0	0	0	0
Texas:												
Dallas	0	0	------	0	11	0	3	0	6	0	0	1
Galveston	3	0	------	0	0	0	2	0	0	1	0	0
Houston	5	0	------	1	0	3	10	0	2	0	0	0
San Antonio	0	0	3	3	0	1	2	0	7	0	0	1
MOUNTAIN												
Montana:												
Billings	0	0	------	0	1	0	2	0	4	0	0	0
Great Falls	0	0	------	0	1	0	2	0	1	0	0	0
Helena	0	0	------	0	0	0	0	0	2	0	0	0
Missoula	0	0	------	0	0	0	2	0	1	0	0	0
Idaho:												
Boise	0	0	------	0	1	0	1	0	1	0	0	0
Colorado:												
Denver	2	0	------	1	8	1	6	0	29	0	0	13
Pueblo	0	0	------	0	0	0	2	0	9	0	0	0
Utah:												
Salt Lake City	0	0	------	0	27	0	1	0	11	0	0	4

City reports for week ended February 10, 1945—Continued

	Diphtheria cases	Encephalitis, infectious, cases	Influenza		Measles cases	Meningitis, meningococcus, cases	Pneumonia deaths	Poliomyelitis cases	Scarlet fever cases	Smallpox cases	Typhoid and paratyphoid fever cases	Whooping cough cases
			Cases	Deaths								
PACIFIC												
Washington:												
Seattle	1	0	-----	0	16	0	9	0	26	0	0	4
Spokane	0	0	-----	0	1	0	2	1	8	0	0	0
Tacoma	0	0	-----	0	1	2	0	0	8	0	0	0
California:												
Los Angeles	7	0	10	1	27	5	1	0	76	0	0	14
Sacramento	1	0	-----	0	0	0	4	0	8	0	0	7
San Francisco	1	0	-----	0	57	6	10	0	33	0	1	9
Total	69	3	105	42	349	94	491	3	1,694	1	18	563
Corresponding week, 1943	60	-----	443	72	5,795	-----	500	-----	2,130	0	11	370
Average, 1940–44	74	-----	1,156	[1] 59	[2] 3,781	-----	[1] 529	-----	1,463	2	13	897

[1] 3-year average, 1942–44.
[2] 5-year median, 1940–44.

Dysentery, amebic.—Cases: New York, 1; San Francisco, 2.
Dysentery, bacillary.—Cases: Hartford 1; New York, 2; Charleston, S. C., 6: Los Angeles 5.
Dysentery, unspecified.—Cases: Richmond, 1; San Antonio, 2.
Typhus fever, endemic.—Cases: Tampa, 8; New Orleans, 1; San Antonio, 2.

Rates (annual basis) per 100,000 population, by geographic groups, for the 89 cities in the preceding table (estimated population, 1943, 34,885,900)

	Diphtheria case rates	Encephalitis, infectious, case rates	Influenza		Measles case rates	Meningitis, meningococcus, case rates	Pneumonia death rates	Poliomyelitis case rates	Scarlet fever case rates	Smallpox case rates	Typhoid and paratyphoid fever case rates	Whooping cough case rates
			Case rates	Death rates								
New England	2.6	0.0	5.3	10.5	139	21.0	86.6	0.0	305	0.0	2.6	194
Middle Atlantic	6.9	0.0	4.2	1.9	24	14.3	68.5	0.5	224	0.0	5.6	88
East North Central	5.5	0.6	5.5	4.9	32	13.4	61.4	0.0	279	0.0	0.6	99
West North Central	17.9	4.0	4.0	6.0	22	11.9	89.5	0.0	312	0.0	2.0	40
South Atlantic	19.6	0.0	90.0	16.3	31	4.9	94.8	1.6	360	0.0	3.3	95
East South Central	11.8	0.0	47.2	17.7	65	29.5	129.8	0.0	106	0.0	0.0	6
West South Central	25.8	0.0	28.7	23.0	32	14.3	120.5	0.0	72	2.9	0.0	20
Mountain	15.9	0.0	0.0	7.9	302	7.9	127.1	0.0	461	0.0	0.0	135
Pacific	15.8	0.0	15.8	1.6	161	20.6	41.1	1.6	251	0.0	1.6	54
Total	10.5	0.5	16.0	6.4	53	14.3	74.7	0.5	258	0.2	2.7	86

TERRITORIES AND POSSESSIONS

Hawaii Territory

Plague (rodent).—On January 4, 1945, plague infection was proved in a pool of five mice found December 28, 1944, in District 4A, Kapulena area, Honokaa, Island of Hawaii, T. H.

FOREIGN REPORTS

CANADA

Provinces—Communicable diseases—Week ended January 27, 1945.—During the week ended January 27, 1945, cases of certain communicable diseases were reported by the Dominion Bureau of Statistics of Canada as follows:

Disease	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia	Total
Chickenpox		7		188	414	48	42	61	188	948
Diphtheria		6		28	3	15				52
Dysentery, bacillary				9						9
German measles		6		8	12		2	4	39	71
Influenza		2	1		129	8			22	162
Measles			3	118	59	2	40	18	262	502
Meningitis, meningococcus			2	2	1					5
Mumps		3		238	141	12	14	68	31	507
Poliomyelitis						1		1		2
Scarlet fever		7	7	96	104	17	7	89	50	377
Tuberculosis (all forms)		8	7	180	48	3		41	22	309
Typhoid and paratyphoid fever			1	3		1				5
Undulant fever				1	2					3
Venereal diseases:										
Gonorrhea	1	20	22	55	169	28	22	37	46	400
Syphilis	3	8	28	120	109	17	11	13	17	326
Whooping cough		8	1	300	77	4	14	10	37	451

CUBA

Provinces—Notifiable diseases—4 weeks ended January 27, 1945.—During the 4 weeks ended January 27, 1945, cases of certain notifiable diseases were reported in the Provinces of Cuba as follows:

Disease	Pinar del Rio	Habana[1]	Matanzas	Santa Clara	Camaguey	Oriente	Total
Cancer	1		5	3	1	7	17
Chickenpox		11		6	1	5	23
Diphtheria		28	8	2		2	40
Hookworm disease		8					8
Leprosy				1	1	5	7
Malaria	6	1		4	10	169	190
Measles				7	3	10	20
Poliomyelitis		1					1
Scarlet fever		1					1
Tuberculosis	10	8	17	43	8	31	117
Typhoid fever	15	57	3	21	6	39	141
Typhus fever (murine)						1	1
Whooping cough		5					5
Yaws						1	1

[1] Includes the city of Habana.

FRANCE

Paris—Influenza.—According to a report dated February 2, 1945, a mild type of influenza is said to be prevalent in Paris, France.

GREAT BRITAIN

England and Wales—Infectious diseases—13 weeks ended September 30, 1944.—During the 13 weeks ended September 30, 1944, cases of certain infectious diseases were reported in England and Wales as follows:

Disease	Cases	Disease	Cases
Cerebrospinal meningitis	404	Pneumonia	5,045
Diphtheria	4,822	Poliomyelitis	182
Dysentery	3,507	Puerperal pyrexia	1,840
Lethargic encephalitis	18	Scarlet fever	17,868
Measles	23,854	Typhoid and paratyphoid fever	200
Ophthalmia neonatorum	854	Whooping cough	21,261

England and Wales—Vital statistics—Quarters ended March 31, 1944, June 30, 1944, and September 30, 1944.—The following table shows the numbers of marriages, births, and deaths with rates per 1,000 population in England and Wales for the quarters ended March 31, June 30, and September 30, 1944, and are provisional:

	Quarter ended March 31		Quarter ended June 30		Quarter ended September 30	
	Number	Rate per 1,000 population	Number	Rate per 1,000 population	Number	Rate per 1,000 population
Marriages	62,599	12.1	82,215	16.0	82,302	15.8
Live births	184,145	17.9	199,326	19.3	183,659	17.6
Deaths, all causes	146,204	14.2	115,525	11.2	107,319	10.3
Deaths under 1 year of age		[1] 58		[1] 43	7,325	[1] 40

[1] Per 1,000 live births.

NOTE.—Rates are provisional and are based on the 1939 midyear population.

JAMAICA

Notifiable diseases—4 weeks ended January 13, 1945.—During the 4 weeks ended January 13, 1945, cases of certain notifiable diseases were reported in Kingston, Jamaica, and in the island outside of Kingston as follows:

Disease	Kingston	Other localities	Disease	Kingston	Other localities
Cerebrospinal meningitis		1	Leprosy		2
Chickenpox	5	14	Tuberculosis (pulmonary)	22	39
Diphtheria	2	2	Typhoid fever	10	81
Dysentery	12	52	Typhus fever	2	
Erysipelas		1			

NEW ZEALAND

Notifiable diseases—4 weeks ended January 27, 1945.—During the 4 weeks ended January 27, 1945, certain notifiable diseases were reported in New Zealand as follows:

Disease	Cases	Deaths	Disease	Cases	Deaths
Actinomycosis	1		Malaria	41	
Cerebrospinal meningitis	9	4	Poliomyelitis	1	
Diphtheria	91	6	Puerperal fever	11	
Dysentery:			Scarlet fever	364	
Amebic	1		Tetanus	1	1
Bacillary	15		Trachoma	3	
Erysipelas	21	1	Tuberculosis (all forms)	164	65
Food poisoning	3		Typhoid fever	7	
Hookworm disease	1		Undulant fever	2	

SWEDEN

Notifiable diseases—December 1944.—During the month of December 1944, cases of certain notifiable diseases were reported in Sweden as follows:

Disease	Cases	Disease	Cases
Cerebrospinal meningitis	12	Poliomyelitis	124
Diphtheria	409	Scarlet fever	2,289
Dysentery	199	Syphilis	136
Gonorrhea	1,254	Typhoid fever	7
Hepatitis, epidemic	717	Weil's disease	6
Paratyphoid fever	7		

REPORTS OF CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER RECEIVED DURING THE CURRENT WEEK

NOTE.—Except in cases of unusual incidence, only those places are included which had not previously reported any of the above-mentioned diseases, except yellow fever, during the current year. All reports of yellow fever are published currently.

A table showing the accumulated figures for these diseases for the year to date is published in the PUBLIC HEALTH REPORTS for the last Friday in each month.

(Few reports are available from the invaded countries of Europe and other nations in war zones.)

Plague

Senegal.—For the period January 21–31, 1945, 15 cases of plague were reported in Senegal.

Smallpox

Ceylon—Northern Province.—According to information dated January 20, 1945, 127 cases of smallpox with 26 deaths were reported up to January 17, 1945. These figures include some cases of chickenpox.

Typhus Fever

Bulgaria.—Typhus fever has been reported in Bulgaria as follows: Weeks ended—December 6, 1944, 5 cases; December 13, 1944, 2 cases; December 20, 1944, 9 cases.

Egypt.—For the week ended January 13, 1945, 286 cases of typhus fever with 30 deaths were reported in Egypt.

Morocco (French).—For the period December 11–20, 1944, 78 cases of typhus fever were reported in French Morocco.

Turkey.—For the week ended February 10, 1945, 128 cases of typhus fever were reported in Turkey.

Union of South Africa—Cape Province.—During the month of November 1944, 260 cases of typhus fever with 16 deaths were reported in Cape Province, Union of South Africa. From 30 to 60 cases of typhus fever a week are being currently reported in the Transkei region.

Yugoslavia—Croatia.—For the month of December 1944, 155 cases of typhus fever were reported in Croatia, Yugoslavia, including 82 cases in Bihac.

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FEDERAL SECURITY AGENCY

UNITED STATES PUBLIC HEALTH SERVICE

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